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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/747,515	12/21/2000	Andreas Arming	STL000011US2	3164

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EXAMINER
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WONG, LESLIE

ART UNIT	PAPER NUMBER
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2177

DATE MAILED: 10/06/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/747,515

Applicant(s)

ARNING ET AL.

Examiner

Leslie Wong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 55-72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 55-72 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13. 6) ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 29 August 2003 has been entered.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 55-59, 61-65, and 67-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chen et al.** (U.S. Patent 5,727,199) in view of **Agrawal et al.** (U.S. Patent 5,647,058).

Regarding claims 55, 61, and 67, **Chen et al.** teaches a method, an apparatus and an article of manufacture of accessing a subject multi-dimensional database stored on a data store connected to a computer, comprising:

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- a). receiving an indication of a number of features of said subject multi-dimensional database to be identified (col. 3, lines 56-61 and col. 4, lines 30-34);
- b). performing feature identification to identify the indicated number of features (col. 4, line 60 – col. 7, line 30); and
- c). **Chen et al.** does not clearly teach a step of creating an index for the subject multi-dimensional database using the identified number of features.

**Agrawal et al.**, however, teaches high dimensional indexing by taking N-dimensional data vectors and builds an index of k-dimensional points (col. 4, lines 6-30).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to create an index for the subject multi-dimensional database using the identified number of features in order to accurately retrieve desired information quickly and effectively.

Regarding claims 56, 62, and 68, **Agrawal et al.** further teaches a step wherein creating the index comprises creating a multi-dimensional database that is derived from the subject multi-dimensional database (col. 4, lines 6-9).

Regarding claims 57, 63, and 69, **Chen et al.** further teaches wherein receiving the number of features to be identified comprises receiving a parameter value (col. 3, lines 54-61).

Regarding claims 58, 64, and 70, **Agrawal et al.** does not teach a step wherein feature identification comprises generating an ordered list of multi-dimensional points (col. 5, lines 38-41).

Regarding claims 59, 65, and 71, **Agrawal et al.** further teaches a step wherein further comprising creating the index using the list of multi-dimensional points (col. 4, lines 6-10).

4. Claims 60, 66, and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chen et al.** (U.S. Patent 5,727,199) in view of **Agrawal et al.** (U.S. Patent 5,647,058) as applied to claims 55-59, 61-65, and 67-71 and in further view of **Agrawal et al.[2]** (U.S. Patent 6,094,651).

Regarding claims 60, 66, and 72, **Chen et al.** and **Agrawal et al.**, do not teach a step wherein the index stores deviation values for each of the identified number of features.

However, **Agrawal et al.[2]** teaches a step for locating data anomalies in a K dimensional data cube (Fig. 6; col. 2, line 38 - col. 3, line 10).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to incorporate the feature of exploring the performance data for finding regions of anomalies in the data as taught by **Agrawal et al.[2]** in order to identify problem areas and/or new opportunities (col. 1, lines 34-36).

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Bergman et al.** (U.S. Patent 6,408,300)

**Keller** (US 2002/0029207)

**Herbert** (U.S. Patent 5,325,445)

**Bakalash et al.** (US 2002/0029207)

**Ohata et al.** (U.S. Patent 5,864,857)

**Hicks** (U.S. Patent 5,943,677)

**Proctor** (U.S. Patent 6,490,593)

**Martin** (U.S. Patent 6,003,036)

**DeKimpe et al.** (U.S. Patent 6,542,895)

**Foulger et al.** (U.S. Patent 6,578,022)

**Fuh et al.** (U.S. Patent 6,278,994)

**Aggarwal et al.** (U.S. Patent 6,289,354)

**Castelli et al.** (U.S. Patent 6,134,541)

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie Wong whose telephone number is (703) 305-3018. The examiner can normally be reached on Monday to Friday 9:30am - 6:30 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (703) 305-9790. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



Leslie Wong  
Patent Examiner  
Art Unit 2177

lw  
September 29, 2003



JEAN R. HOMERE  
PRIMARY EXAMINER